

(No Model.)

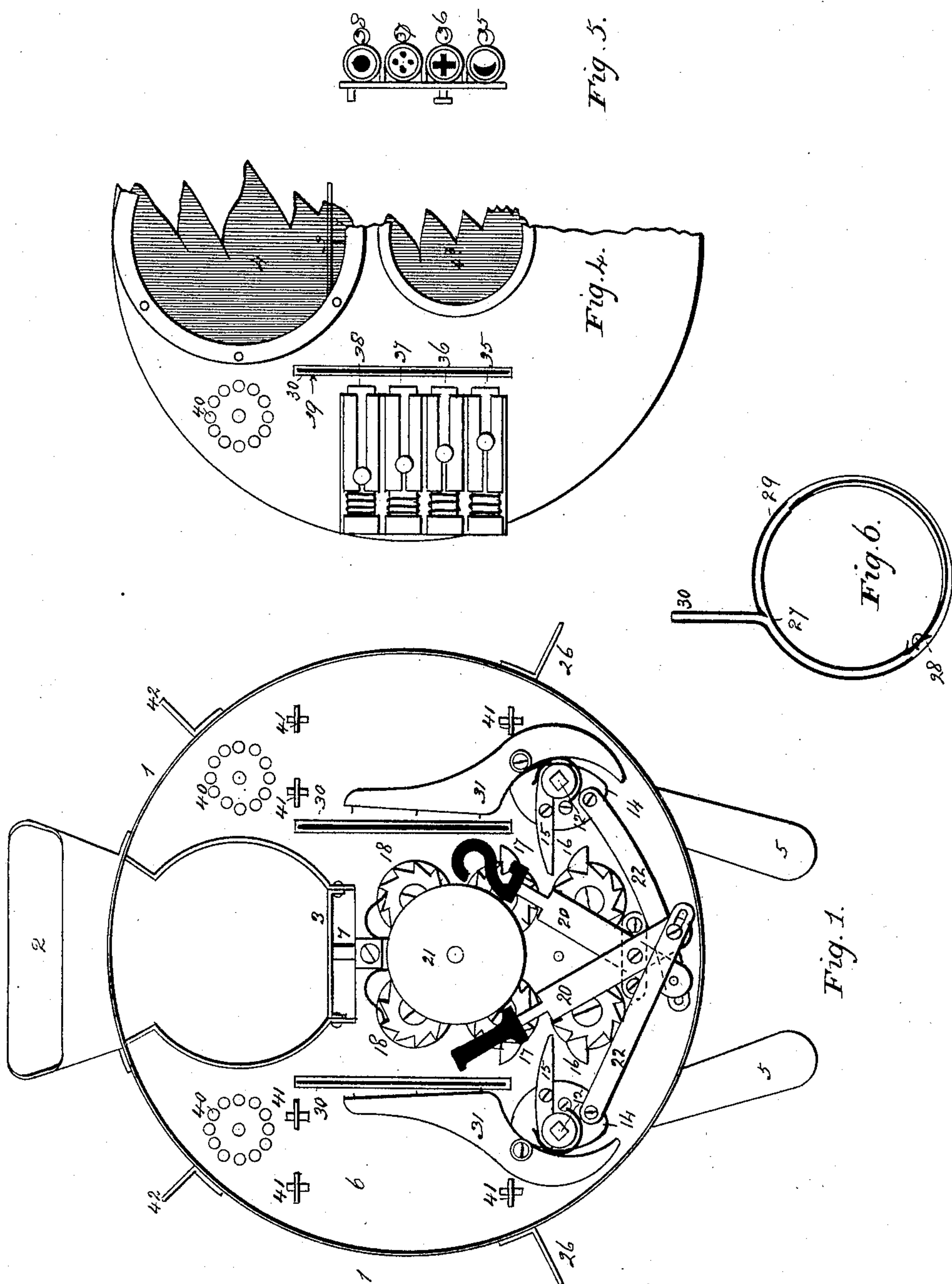
2 Sheets—Sheet 1.

H. T. DAVIS.

MONEY RECEIVING, REGISTERING, RECORDING, AND TICKET
ISSUING DEVICE.

No. 321,010.

Patented June 30, 1885.



Witnesses
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Inventor
HENRY THOMAS DAVIS,
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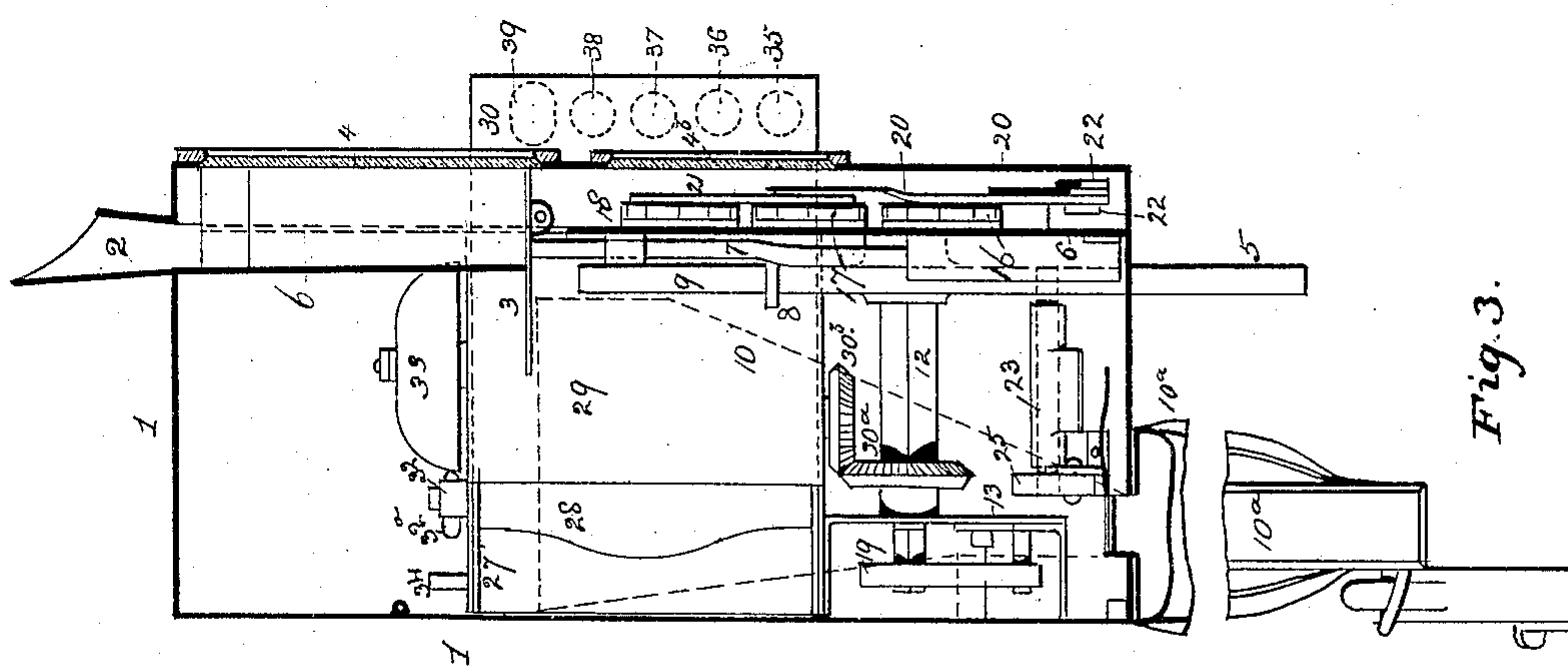
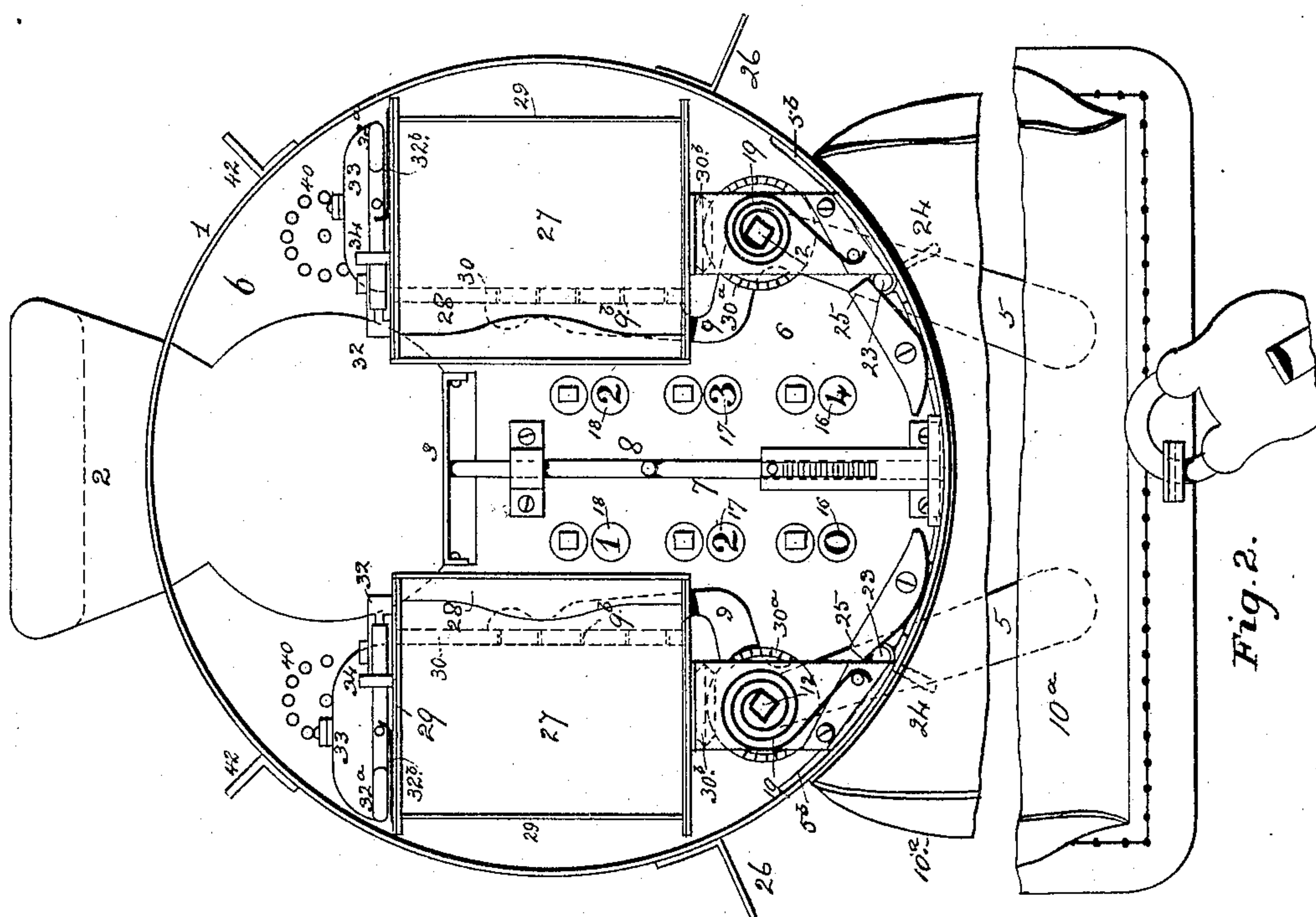
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Witnesses
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UNITED STATES PATENT OFFICE.

HENRY THOMAS DAVIS, OF LONDON, ENGLAND.

MONEY RECEIVING, REGISTERING, RECORDING, AND TICKET-ISSUING DEVICE.

SPECIFICATION forming part of Letters Patent No. 321,010, dated June 30, 1885.

Application filed January 31, 1885. (No model.) Patented in England November 29, 1882, No. 5,683, April 2, 1884, No. 5,819, and July 28, 1884, No. 10,666.

To all whom it may concern:

Be it known that I, HENRY THOMAS DAVIS, a subject of the Queen of England, residing at London, England, have invented an Improve-
5 ment in Apparatus for Receiving Money and for Checking and Recording the Receipt thereof, and for Issuing Vouchers therefor, (patented in Great Britain and Ireland November 29, 1882, No. 5,683, for which I have applied for
10 further patents in Great Britain and Ireland on April 2, 1884, No. 5,819, and on July 28, 1884, under No. 10,666,) of which the following is a specification.

This invention relates to improved apparatus for checking the receipt of fares paid in
15 vehicles or of moneys received as entrance-fees, and is designed to provide a series of coacting checks, the use of any one of which will compel the use of the other to duly register
20 money so received, to issue tickets or vouchers therefor, and at the same time to indicate individual sections of the journey, so as to check the distance traveled by any payer, the section of the journey upon which the ticket
25 was issued or alternatively to indicate by an inked or perforated figure the value of the voucher issued.

Two sheets of drawings, bearing six figures, accompany this specification as part thereof.

30 The same numbers refer in each figure to the same or corresponding parts of the apparatus.

Figure 1 is an elevation of my apparatus with the front screen-plate removed, showing
35 the register or counting device. Fig. 2 is a back view of my apparatus with its back plate removed, showing the cylinders employed for the issue of the tickets or vouchers. Fig. 3 is a transverse section of my apparatus. Fig.
40 4 is a partial outside elevation showing the special device for registering the sections of the route or for stamping values upon the tickets or vouchers. Fig. 5 is a detached end view of the said special device. Fig. 6 is a sectional plan of one of my ticket-issuing cylinders.
45

My apparatus has a casing, 1, of any suitable material and convenient shape, so constructed and locked that access can only be
50 had thereto by an authorized person. An ex-

ternal hopper, 2, is provided to receive the money, which, when introduced therein, falls upon a movable bottom, 3. A plate of glass, 4, inserted in the external front screen-plate allows the money to be plainly seen. 55

Two hand-pulls, 5 5, that project outside the casing, have helical springs around their
spindles, which bring them back into their normal positions after operating the working
60 part of the apparatus. The casing 1 is divided by an intermediate plate, 6, providing a suitable support for the counting-cylinders. The movable bottom 3 of the hopper 2 is hinged or hung on pivots at one edge upon the said
65 intermediate plate, and is supported by an upright spring-bar, 7, provided with a stud, 8, which is drawn down by arms 9 of the hand-pulls 5, which turn upon the spindles 12. The
70 money is thereby allowed to pass from the movable bottom 3 into a chute, 10, and thence into the locked bag 10^a, from which it can be removed only by the inspector. The hand-pull spindles 12 are mounted so as to turn at
75 one end in the intermediate plate, 6, and at the other end in brackets 13. Upon that part of each spindle 12 which projects through the intermediate plate, 6, and between that plate and the outer casing or screen-plate, is fixed
80 a claw, 15, mounted on a pivot upon an eccentric plate, 14, attached to the said spindle 12. The claw 15 is spring-pressed, so that when the hand-pull 5 is operated the said claw 15
85 acts upon a toothed wheel, 16, mounted on a pivot on the intermediate plate, 6, and forming the unit-wheel of the train 16 17 18 of a counting mechanism of well-known form. The indicating-numerals of the counting-train are shown to the rear through apertures in the intermediate plate, as seen in Fig. 2, so as
90 to be observed by the inspector when he unlocks and opens the back plate.

Helical springs 19 are provided on the hand-pull spindles to return them to normal position after each operation.

Each of the said eccentric plates 14 on the
95 hand-pull spindles carries also a slotted link, 22, which, on the operation of the hand-pulls, move the rocking levers 20 20, carrying on their extremities indicating-figures, each corresponding to a hand-pull, respectively, and
100

one or the other of which is thus brought into view in front of a background-disk, 21, Fig. 1, behind a second "glass," 4^b, Fig. 4, in the center of the front screen-plate. By reason of the slotted connection between the links and the indicating-figures, the figure remains in view until the hand-pull has nearly resumed its normal position.

To lock the hand-pulls when the machine is given up into the hands of the inspector, a spring-bolt, 23, Figs. 2 and 3, is shot by means of a button, 24, (which projects outside the case,) into a hole in each of the hand-pull bars. When so shot into position, the spring-lock 25 will fall between the back end of the bolt 23 and the bracket 13, thus holding fast the nose of each spring-bolt 23 in the hand-pull until positively released by manipulation from the inside of the machine. The necks of the hand-pulls just inside the casing of the machine carry strips 5^b, Fig. 2, formed of the same material as the casing, which serve as guards to the openings through which the hand-pulls project, so that the interior of the machine may not be tampered with. The lugs 26 on the outside of the casing are thumb-rests for obtaining purchase in operating the hand-pulls.

My improved means for issuing the tickets are as follows: I place the paper upon which the voucher-forms are printed ready for issue in the form of rolls within the cylinders 27, Figs. 2 and 3. The outer end of each roll of paper is passed under the edge of a spring-clip, 28, and thence pushed forward by hand (in starting it) until it issues from the issuing-tubes 30 at the face of the machine. Each of these cylinders 27 is free to rotate on a center spindle within an exterior casing, 29. The lower end of the said spindle is provided with a bevel-wheel, 30^b, gearing into a corresponding bevel-wheel, 30^a, keyed to the spindle 12 of one of the hand-pulls 5. When, then, one of the hand-pulls is operated, the said bevel-gearing 30^a and 30^b partly rotates the cylinder 27 corresponding thereto and the paper roll therein to a certain prearranged extent, causing the delivery of a portion of the ticket-ribbon equal to the breadth of one ticket or voucher. Should the delivery not be completed nor the fare duly registered, the protruded ticket is drawn back into the case by the succeeding recoil of the cylinder, owing to the grip on the paper of the spring-clip 28 on the cylinder. When, however, the travel is completed, a check-lever, 31, provided with pin-points, is thrown forward by the before-described eccentric plate 14 on the hand-pull spindle 12, seizing the ticket-ribbon in the issuing-tube 30, and thus preventing its return as the cylinder recoils, the spring-clip thereon slipping easily over the surface of the paper. On the return of the hand-pull lever 5 into its normal position the eccentric plate 14 disengages the before-described check-lever 31; but simultaneously the upper part, 9, of the hand-pull lever 5, which is

also provided with engaging-points, as shown in dotted lines at 9^b in Fig. 2, seizes the said ticket-ribbon and holds it securely, so that the projecting voucher may be readily torn from the mouth of the issuing-tube 30, and no further voucher can be withdrawn until a further operation of the hand-pull lever has been made. At the same time with the issue of the ticket, as before described, a pin, 34, upon the upper portion of the revolving cylinder 27 strikes a lever, 32, which carries a hammer, 32^a, acted on by a spring, 32^b, so as to strike a bell, 33, and thus indicate audibly that the issue of the ticket and register of the fare is complete. On the recoil of the cylinder 27 the stud or pin 34 pushes aside and passes the spring-pressed pawl of the lever 32.

The external end of each issuing-tube 30 is provided with a series of holes, opposite to which are fixed, upon the face of the machine, a series of cylinders, 35 36 37 38, Figs. 2 and 4, which may contain a charge of printing-ink of different or the same colors contained in plungers with variously-shaped openings; or, alternatively, the plungers may be provided with perforating-points in a variety of designs, so as to mark the tickets as they are issued with a similar or varying distinguishing-mark at different heights upon the said tickets as they are issued. These marks will serve to indicate the different sections of the journey, or may be used to stamp various indicating values upon the vouchers. A further orifice, 39, is also provided in each issuing-tube opposite to the line of successive numbers printed on the strip of vouchers. Through this orifice the indicating-number of the next successive but unissued ticket can be seen at any time by the inspector or user, so as to check at any moment the number of tickets issued, and thus the amount of money that should be in hand.

Sound-escape holes 40 are provided in the front screen-plate and the intermediate plate, 6, as represented in Figs. 1, 2, and 4. The casings 29 of the cylinders 27 are attached to said intermediate plate by buttons 41, Fig. 1, and the outer casing, 1, is provided with loops 42, Figs. 1 and 2, by which it is attached to a neck-strap or the like as means for carrying the apparatus.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is—

1. In a money-receiving, registering, and ticket-issuing device, the combination, substantially as herein specified, of an oscillating hollow cylinder having a spring-clip and containing a rolled ribbon of tickets, an issuing-tube through which said ribbon passes, and a pair of toothed check-levers acting successively on the ribbon within said tube, for the purpose set forth.

2. In a money-receiving, registering, and ticket-issuing device, the combination, substantially as herein specified, of a ribbon of tickets, an issuing-tube through which said

ribbon passes, having a series of apertures in its protruding end extending transversely across the same, and a series of plungers aligned with said apertures, respectively, for
5 stamping the tickets with distinguishing-marks located in different relative positions thereon.

3. In a money-receiving, registering, and ticket-issuing device, the combination, with a
10 hopper and locked bag to receive the money, of a tilting bottom for the hopper, a registering train or counter, an oscillating hollow cylinder having a spring-clip, and provided with a rolled ribbon of voucher-tickets, an issuing-
15 tube through which said ribbon passes, a pair

of issue-controlling check-levers acting on said ribbon within said tube, and a hand-pull recoil-spring, and transmitting mechanism for simultaneously actuating said tilting bottom, counter, and ticket-issuing cylinder, and subsequently actuating said check-levers one after the other, substantially as herein specified. 20

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY THOMAS DAVIS.

Witnesses:

SAM P. WILDING,

RICH. A. HOFFMANN.